REMOTE CONTROL DATA IN GREENBUILDING BY USING RASPBERRY PI AS A CLIENT

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Alhamdulillah that Allah give me the power to finish this work. This project is dedicated to my parents, late father MR JIHAD ASHAJ & My mother FATIMAH MOHAMMED and all my family in IRAQ,,,,,, Thank you

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ABSTRACT

Monitoring of the relative humidity and temperature play an important role recording the variation of ambient as a function of time using Raspberry PI in green buildings when we were not around. The purpose of this project is to monitor and develop the data acquisition system for humidity and temperature measurement. This project presents the digital sensors inter IC (I2C) circuits with programming technique for remote sensing of relative humidity and temperature. The control unit converts the relative humidity and temperature which sense by the sensors. Then, the client sends the digital data to the server and finally the data will be processed by the PC. After that, the interface programmed is developed using Raspberry PI instead of PC which allow the user to set up important parameters and time for the operation. The data acquisition system has been designed that can perform standalone or PC based via digital sensors socket programming communication. This system also is equipped with software calibration Linux in order to obtain more accurate measurement.

ABSTRAK

Pemantauan kelembapan dan suhu memainkan peranan penting rakaman variasi persekitaran sebagai fungsi masa menggunakan Raspberry PI dalam bangunan hijau apabila kita tidak sekitar. Tujuan projek ini adalah untuk memantau dan membangunkan sistem pemerolehan data untuk ukuran kelembapan dan suhu. Projek ini membentangkan sensor digital antara IC (I2C) litar dengan teknik pengaturcaraan untuk penderiaan jauh daripada kelembapan dan suhu. Unit kawalan menukarkan kelembapan dan suhu yang rasa oleh sensor. Kemudian, pelanggan menghantar data digital kepada pelayan dan akhirnya data yang akan diproses oleh PC. Selepas itu, antara muka diprogramkan dibangunkan dengan menggunakan Raspberry PI bukannya PC yang membolehkan pengguna untuk menetapkan sehingga parameter penting dan masa untuk operasi. Sistem perolehan data telah direka yang boleh melakukan berdiri atau PC berasaskan melalui sensor digital soket komunikasi pengaturcaraan. Sistem ini juga dilengkapi dengan perisian penentukuran Linux untuk mendapatkan ukuran yang lebih tepat.

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